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	Form Ap	Approved. O.M.B. Nos. 2070-0012 and 2070-0038						
U.S. ENVIRONMENTAL PROTECTION AGENCY						AGE	NCY USE ONLY	
PREMANUI NOT			_	E	Date of	f receipt:		
	FOR NEW C	HEMICAL						
completed, Office of Po	Documen	Pollution Pr	y by US Mail: revention and Toxics ffice (7407M)	S	Submiss	ion Report Number		
form to: US EPA, 12 WASHINGT Contact Nu		TON, D.C.	ylvania Ave NW 20460	XCX4140606225183740				
Total Number of Pages	S User	Fee Payn	nent ID N	lumber			TS Number	
48	25FNHOH3					EC6332		
	•			INSTRUCTIONS				
 Before you complete this fo (TSCA) Information Service If a user fee has been remit 	rm, you should read the "Instructions by calling 202-554-1404, or faxing 202-5554, or faxing 202-554-1404, or faxing 202-554-1404, or faxing 202-5554,	s Manual for F 202-554-5603 indicate in the	Premanufact 3). e boxes abo	ture Notification" (the Instruve the TS-user fee identific	uctions Manu	ual is available fi er you have gen	stimates if you do not have actual data. rom the Toxic Substances Control Act erated. Remember, your user fee ID number	
Part I – GENERAL INFO	ORMATION		TEST D	ATA AND OTHER [DATA			
You must provide the currer. Name of the new chemical identity as confidential. You submit chemical identity info will not be complete and the receives this information. A should reference your TS us Section 5 Notice submission submit an original notice incomformation as confidential, submitted.	e to to nission A ssion or all st ned any	description of all other data known to or reasonably ascertainable by you, if these data related to the health and environmental effects on the manufacture, processing, distrit commerce, use, or disposal of the new chemical substance. Standard literature citatio be submitted for data in the open scientific literature. Complete test data (written in Ernot summaries of data, must be submitted if they do not appear in the open literature. should clearly identify whether test data is on the substance or on an analog. Also, the chemical composition of the tested material should be characterized. Following are exoftest data and other data. Data should be submitted according to the requirements of \$720.50 of the Premanufacture Notification Rule (40 CFR Part 720).						
Part II – HUMAN EXPO RELEASE	SURE AND ENVIRONMEN	NTAL		Test Data (C	Check Below any included in this notice)			
If there are several manufac	cture, processing, or use operations A and B of this notice, repr			Environmental fate d	data		Other Data	
Part III – LIST OF ATTA	ACHMENTS			Health effects data			Risk Assessments	
For paper submissions, atta	ach additional sheets if there is a question fully. Label each contin			Environmental effect		s (A physical s	Structure/activity relationships and chemical properties worksheet is	
sheet with the corresponding	g section heading. In Part III, list or other data and any optional		X	located on the last			and onemical properties worksheet is	
information included in the				Test data not in the	possession	n or control of	the submitter	
OPTIONAL INFORMAT		aider in		TYP	PE OF NOT	TICE (Check	Only One)	
evaluating the new substan	nation that you want EPA to con ce. On page 11 of this form, spa scribe pollution prevention and	ace has	X	PMN (Premanufactu	re Notice)			
recycling information you m "Binding" boxes are include	ay have regarding the new sub d throughout this form for you to	stance. o		SNUN (Significant N	lew Use No	otice)		
make in this section, such a	be bound to certain statements is use, production volume, protent is to reduce delays that routing	ective		TMEA (Test Marketi	ing Exempt	tion Applicatio	n)	
accompany the developmen	nt of consent orders or Signification ding" box in a PMN does not by	ant New		LVE (Low Volume E	exemption)	@ 40 CFR 72	23.50(c)(1)	
prohibit the submitter from I	ater deviating from the informate ported in the form; however, in	tion		LOREX (Low Release	se/Low Exp	posure Exemp	otion) @ 40 CFR 723.50(c)(2)	
case of exemption application	ons (such as TMEA, LVE, LOR I in such notifications is binding	EX)		LVE Modification				
submitter when the Agency	approves the exemption applic volume "binding" box is chosen	ation,		LOREX Modification	1			
L * L.			1 1					

CONFIDENTIALITY CLAIMS

You may claim any information in this notice as confidential. To assert a claim on the form, mark (X) the confidential box next to the information that you claim as confidential. To assert a claim in an attachment, circle or bracket the information you claim as confidential. If you claim information in the notices as confidential. you must also provide a sanitized version of the notice, (including attachments). For additional instructions on claiming information as confidential, read the Instructions Manual.

Replaces previous editions of EPA Form 7710-25

of chemicals or polymers (Prenotice Communication # required, enter # on

Mark (X) if any information in this notice is claimed as confidential.

Х

Mock Submission

Mark (X) if pending Letter of Support

IS THIS A CONSOLIDATED PMN (Y/N)?



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The public reporting and recordkeeping burden for this collection of information is estimated to average 93 hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed EPA Form 7710-25 to this address.

CERTIFICATION -- A printed copy of this signature page, with original signature, must be submitted with CD or paper submission.

I certify that to the best of my knowledge and belief:

- 1. The company named in Part I, section A, subsection 1a of this notice form intends to manufacture, import or process for a commercial purpose, other than in small quantities solely for research and development, the substance identified in Part I, Section B.
- 2. All information provided in this notice is complete and truthful as of the date of submission.
- 3. I am submitting with this notice all test data in my possession or control and a description of all other data known to or reasonably ascertainable by me as required by §720.50 of the Premanufacture Notification Rule.

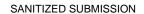
Additional Certification Statements:

If you are submitting a PMN, Intermediate PMN, Consolidated PMN, or SNUN, check the following **user fee** certification statement that applies:

certification	on statement that applies:						
X	The Company named in Part I, Section A has remitted the fee of \$2500 spec	cified in 40 CFR 700.45(b), or					
	The Company named in Part I, Section A has remitted the fee of \$1000 for an Intermediate PMN (defined @ 40 CFR 700.43) in accordance with 40 CFR 700.45(b), or						
	The Company named in Part I Section A is a small business concern under accordance with 40 CFR 700.45(b).	40 CFR 700.43 and has remitted a fee of	\$100 in				
Low Rele	submitting a Low Volume Exemption (LVE) application in ac ase and Low Exposure Exemption (LoRex) application in ac ing certification statements:						
	The manufacturer submitting this notice intends to manufacture or import the new chemical substance for commercial purposes, other than in small quantities solely for research and development, under the terms of 40 CFR 723.50.						
	The manufacturer is familiar with the terms of this section and will comply w	ith those terms; and					
	The new chemical substance for which the notice is submitted meets all app	plicable exemption conditions.					
	If this application is for an LVE in accordance with 40 CFR 723.50(c)(1), the the exempted substance for commercial purposes within 1 year of the date						
anticipate	racy of the statements you make in this notice should reflect you discuss regarding the chemical substance described herein. An sentation is subject to criminal penalty pursuant to 18 USC 100	y knowing and willful	Confidential				
Signature ar Authorized (Signature Re	Official (Original	Date	X				



Secti	on A	. – SUBMITTER II	ENTIFI		i I GENI	ERAL IN	IFORMATION				
Secti	OII /				ntial" box nex	xt to any s	ubsection you clai	m as co	nfidential		
1a.		Person Submitti	ng Noti	ce (in U.	.S.)					Confidential	
Name	of Au	of Authorized Official (first) XXX (last) XXX									
Positio	on	n XXX									
Compa	any		XXX								
Mailing	g Add	ress (number & street)	XXX								
City		XXX		State XXX Postal Code XXX							
email		XXX									
b.		Agent (if Applica	able)							Confidential	
Name	of Au	thorized Official	(first)				(last)				
Positio	on										
Compa	any									1	
Mailing	g Add	ress (number & street)								1 📙	
City					State		Postal Code				
e-mail						Telepho					
C.		Joint Submitter	(if appli	cable)		(include	area code)			Confidential	
	are si	ubmitting this notice as			ssion, mark	(X)				0011110111101	
Name	of Au	uthorized Official	(first)		· ·	· ,	(last)			-	
Positio										-	
										 	
Compa											
Mailing	g Add	ress (number & street)			1	1	1			_	
City					State		Postal Code				
e-mail						Teleph (includ	one e area code)				
2.		Technical Conta	ct (in U	.S.)						Confidential	
Name	of Au	thorized Official	(first) X	XX			(last) XXX				
Positio	on		XXX							-	
Compa	anv		XXX							-	
		ress (number & street)								X	
`	y Add		XXX		0					-	
City		XXX			State	XXX Telepho	Postal Code	XXX	<u> </u>	-	
e-mail		XXX					area code)	XXX	(
3.		ou have had a prenotice notice and EPA assign				g			Mark (X) if none	Confidential	
Э.		er the number.	eu a FC N	number to t	ine nolice,				X		
		ou previously submitted mical substance covere				:			Mark (X) if none	Confidential	
4.	exe	mption number assigne	ed by EPA	. If you pre	viously						
		mitted a PMN for this s gned by EPA (i.e. with							X		
	If yo	ou have submitted a no	tice of Bor	na fide inte	nt to	XXX			Mark (X) if none	Confidential	
5.		nufacture or import for this notice, enter the no								X	
6.					Type	of Notic	e – Mark (X)			<u> </u>	
	Mar	nufacture Only	Χ	Ir	mport Only						
1.	Bind	ding Option	X	2. B	Sinding Optio	n		3.	Both		





	Part I – GENERAL INI	FORM	ATION Co	ntinued			
Section B - CHEMICAL IDE				ct Chemical Abstr clature rules and o		of the sul	bstance
	Mark (X) the "Confidential" box ne						
Complete either item 1 (Clas	s 1 or 2 substances) or 2 (Polymers) as a	appropri	ate. Complete a	all other items.			
the name, company, and add	chemical identity information for you (for dress of that person in a continuation she	et.	em 1 or 2), mar	k (X) the box at the	e right. Identify		
1. Class 1 or 2 chemical substances (for definitions of class 1 and class 2 substances, see the Instructions Manual) Class 1 Class 1 Class 2 CBI							
a. Class of substance - Mar	rk (X)						X
b. Chemical name (Currently correct Chemical Abstracts (CA) Name that is consistent with TSCA Inventory listings for similar substances. For Class 1 substances a CA Index Name must be provided. For Class 2 substances either a CA Index Name or CA Preferred Name must be provided, which ever is appropriate based on current CA index nomenclature rules and conventions). XXX							X
	a number already exists for the substance	-	XXX				
	thod you used to develop or obtain the sp	pecified	chemical identit	y information repo		ce: (check	one).
Identification report obtain	y Expert Service - a copy of the ned from the CAS Inventory Expert ted as an attachment to this notice)	X	IES Order Number	341026	Method 2 (Other Source)		
Enter Attachment filename	for Part I, Section B, 1. c.		PMN IESAlpha	a 6332 SAN.pdf			
d. Molecular formula	XXX						X
e. For a class 1 substance,	provide a complete and correct chemical chemical structure diagram, as complete	structur	e diagram. For	a class 2 substan	ce, provide a co	orrect	
See Attachment 001 (Structu		as Carrio	e known, ii one	can be reasonab	y ascertained.		
Enter Attachment filename	for Part I. Section B. 1. e.		StructureAlr	oha 6332 SAN odf			1 1



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PMN Page 4a

For a class 2 substance - (1) List the immediate precursor substances with their respective CAS Registry Numbers. (2) Describe the nature of the reaction or process. (3) Indicate the range of composition and the typical composition (where appropriate).	Confidential					
e. (1) List the immediate precursor substance names with their respective CAS Registry Numbers.	X					
XXX						
Enter Attachment filename for Part I, Section B, 1. e. (1)						
e. (2) Describe the nature of the reaction or process.	X					
xxx						
Enter Attachment filename for Part I, Section B, 1. e. (2)						
e. (3) Indicate the range of composition and the typical composition (where appropriate).	X					
xxx	<u>—</u>					
Enter Attachment filename for Part I, Section B, 1. e. (3)						



4P5 PMN Page 5

Pai	rt I GENERAL II	NFORMA		Con	tinued				
Section B CHEMICAL IDEN			ed						
2. Polymers (For a definition of polymera. Indicate the number-average weight			tion of the no	lymer v	ou intend to	manufactu	re	Confide	ntial
Indicate maximum weight percent of below 500 and below 1,000 absolute	low molecular weight spec	ies (not inclu							
De	escribe the methods of meas	surement or t	he basis for y	our es	timates:				
GPC Othe	r (Specify Below)								
Specify Other:									
(i) lowest number average molecular (ii) maximum weight % below 500 molecular weight: (iii) maximum weight % below 1000 molecular weight:									lar
Enter Attachment filename for Pa									
 b. You must make separate confidentiality claims for monomer or other reactant identity, composition information, and residual information. Mark (X) the "Confidential" box next to any item you claim as confidential (1) - Provide the specific chemical name and CAS Registry Number (if a number exists) of each monomer or other reactant used in the manufacture of the polymer. (2) - Mark (X) this column if entry in column (1) is confidential. (3) - Indicate the typical weight percent of each monomer or other reactant in the polymer. (4) - Choose "yes" from drop down menu if you want a monomer or other reactant used at two weight percent or less to be listed as part of the polymer description on the TSCA Chemical Substance Inventory. (5) - Mark (X) this column if entries in columns (3) and (4) are confidential. (6) - Indicate the maximum weight percent of each monomer or other reactant that may be present as a residual in the polymer as manufactured for commercial purposes. (7) - Mark (X) this column if entry in column (6) is confidential. 									
Monomer or other r	eactant specific chemical na	ame		CBI (2)	Typical composition (3)	Include in identity (4)	CBI (5)	Max residual (6)	CBI (7)
CAS Registry Number (1)									
CAS Registry Number (1)									
CAS Registry Number (1)									
CAS Registry Number (1)									
CAS Registry Number (1)									
Mark (X) this box if the data continues of	n the next page.		•						

N2014P5A PMN Page 5a

SANITIZED SUBMISSION

c. Please identify which method you used to develop or obtain the (check one).	specified c	hemical identity information reported in this notice	СВІ
Method 1 (CAS Inventory Expert Service			
- a copy of the identification report obtained	S Order umber	Method 2	
submitted as an attachment to this notice)	amboi	(other source)	
Enter Attachment filename for Part I, Section B, 2. c.			
d. The currently correct Chemical Abstracts (CA) name for the po	olymer that i	s consistent with TSCA Inventory listings for similar	
polymers.			
CAS Registry Number (if a number already exists for the sub			
e. Provide a correct representative or partial chemical structure of ascertained.	diagram, as	complete as can be known, if one can be reasonably	
Enter Attachment filename for Part I, Section B, 2. e.			



Part I GENERAL INFORMATION Cont	inuad		
Section B CHEMICAL IDENTITY INFORMATION Continued	iiiueu		
3. Impurities			
 (a) - Identify each impurity that may be reasonably anticipated to be present in the chemical subpurpose. Provide the CAS Registry Number if available. If there are unidentified impurities, (b) - Estimate the maximum weight % of each impurity. If there are unidentified impurities, estimate the maximum weight % of each impurity. If there are unidentified impurities, estimate the maximum weight % of each impurity. 	enter "unidentified."		cial
	CAS Registry	Maximum	Confi-
Impurity (a)	Number (a)	Percent % (b)	dential
	(47)		
Mark (X) this box if the data continues on the next page.			
Enter Attachment filename for Part I, Section B, 3.			
Synonyms - Enter any chemical synonyms for the new chemical identified in subsection 1 or 2.			
XXX			
			X
Enter Attachment filename for Part I, Section B, 4.			
5. Trade identification - List trade names for the new chemical substance identified in subsection 1 or 2			
XXX			
			X
Enter Attachment filename for Part I, Section B, 5.			
6. Generic chemical name - If you claim chemical identify as confidential, you must provide a generic n	ame for your substa	nce that reveals	the
specific chemical identity of the new chemical substance to the maximum e Substance Inventory, 1985 Edition, Appendix B for guidance on developing		r to the TSCA Ch	nemical
Amides, from diethylenetriamine, alkenoic acid and tall-oil fatty acids	generic names.		
Enter Attachment flangme for Dort I. Costion D. C			
Enter Attachment filename for Part I, Section B, 6. 7. Byproducts - Describe any byproducts resulting from the manufacture, processing, use, or disposal of the processing of	of the new chemical	substance Prov	ide the
CAS Registry Number if available.			
Byproduct (1)	CAS Re	gistry Number (2)	Confi- dential
XXX		XXX	Х
Mark (X) this box if the data continues on the next page.			



PMN2014P7			Page									
Part I GE	NER	RAL INI	FORM	ATIO	N Co	ntin	ued					
Section C PRODUCTION, IMPORT, AND	USE	INFORM	IATION									
The information on this page refers to consolidated	chemic	cal numbe	r(s):	1	2		3	4		5	6	
Mark (X) the "Con 1. Production volume Estimate the maximum prod volume for any consecutive 12-month period during For a Low Volume Exemption application, if you ch volume and mark (x) in the binding box. If granted,	uction v the first oose to	olume dur st three yea have your	ing the firs ars of proc notice re	st 12 moduction. viewed a	onths of pro	oduction should	n. Also e be on 1	estimate 100% ne	w chem	ical sul	stance	basis.
Maximum first 12-month production (kg/yr) (100% new chemical substance basis) Maximum 12-month production (kg/yr) (100% new chemical substance basis) Binding Option (100% new chemical substance basis) Mark (X)												
xxx xxx X												
Enter Attachment filename for Part I, Section C, 1.												
 2. Use Information You must make separate confidentiality claims for the description of the category of use, the percent of production volume devoted to each category, the formulation of the new substance, and other use information. Mark (X) the "Confidential" Box next to any item you claim as confidential. a. (1)Describe each intended category of use of the new chemical substance by function and application. (2)Mark (X) this column if entry column (1) is confidential business information (CBI). (3)Indicate your willingness to have the information provided in column (1) binding. (4)Estimate the percent of total production for the first three years devoted to each category of use. (5)Mark (X) this column if entry in column (4) is confidential business information (CBI). (6)Estimate the percent of the new substance as formulated in mixtures, suspensions, emulsions, solutions, or gels as manufactured for commercial purposes at sites under your control associated with each category of use. (7)Mark (X) this column if entry in column (6) is confidential business information (CBI). (8)Indicate % of product volume expected for the listed "use" sectors. Mark more than one box if appropriate. Mark (X) to indicate your willingness to have the use type provided in (8) binding. 												
(9)Mark (X) this column if entry(ies) in column Category of use (1)	111 (0) 13	Binding	Prod	33111033	% in	Т (СБІ).	% of	substar	ice expe	ected pe	er use	
(by function and application i.e. a dispersive dye for finishing polyester fibers)	CBI	Option Mark (X)	uction %	CBI	Form- ulation	CBI	Site- limited	Con- sumer*	(8)	Com- mercial	Binding Option	CBI
xxx	(2) X	(3) X	(4) XXX	(5) X	(6) XXX	(7) X	XXX	XXX	XXX	XXX		(9) X
XXX	X	Х	XXX	Х	XXX	Х	xxx	xxx	xxx	xxx		Х
* If you have identified a "consumer" use, please prov consumer products. In addition include estimates of the the chemical reactions by which this substance loses	ne conc	entration o	of the new	chemica	al substan							
Mark (X) this box if the data continues on the next page.				•								
b. Generic use description If you claim any category Read the Instruction Man Drilling fluid additive.						ntial, ei	nter a g	eneric d	escriptio	on of th	at categ	ory.
Enter Attachment filename for Part I, Section (C, 2. b.								CE	Bl		7
3. Hazard Information Include in the notice a copy of data sheet, or other information which will be provided regarding protective equipment or practices for the satisfactory hazard information you include. Mark (X) this box if you attach hazard information and the satisfactory of	to any fe hand	person wl	no is reaso	onably li	kely to be	expose	d to this	s substa	ial safet nce	у	Binding Mark	



2014P8 PMN Page 8

Part II HUMAN EXPOSURE AND ENVIRONMENTAL RELEASE								
Section A INDUSTRIAL SITES CONTROLLED BY THE SUBMITTER Mark (X) the "Confidential" box any item you claim as confidential."								
The information on pages 8 and 8a refer to consolidated chemical number(s): 1 2 3 4 5								
Complete section A for each type of manufacture, processing, or use operation involving the new chemical substance at industry you control. Importers do not have to complete this section for operations outside the U.S.; however, you may still have report requirements if there are further industrial processing or use operations after import. You must describe these operations. See instructions manual 1. Operation description								
	entity of the	e site at which the operation will	occur.			dential		
Name	XXX							
Site address (number and street)	XXX					X		
City	xxx		County	XXX		_		
State			ZIP code	XXX				
sites on a continuation sheet,	and if any o	than one site, enter the number of the sites have significantly diff quested in this section for those	ferent production rates or	nal	XXX	X		
Mark (X) this box if the	data continu	es on the next page.						
b. Type Mark (X)	ufacturing	Processing	Use	•		X		
c. Amount and Duration	Complete	e 1 or 2 as appropriate				Confi- dential		
1. Batch		Maximum kg/batch (100% new chemical substance)	Hours/batch		Batches/year	X		
		XXX	XXX		XXX			
2. Continuous		Maximum kg/day (100% new chemical substance)	Hours/day		Days/year			
d. Process description			Mark (X) to indicate your will have your process description					
pails, 55 gallon drum (2) Provide the identity, materials and feedst chemicals (note freq (3) Identify by number th	i, rail car, tan the approxim ocks (includir uency if not une points of re	steps and chemical conversions. In ak truck, etc.). nate weight (by kg/day or kg/batch on greactants, solvents, catalysts, etcused daily or per batch.). elease, including small or intermitter ne step, assign a second release nu	n a 100% new chemical subst c.), and of all products, recycle nt releases, to the environmen	ance bas streams,	is), and entry point o and wastes. Include	f all starting cleaning		
<u> </u>								



PMN2014P8A

Diagram of the major unit operation steps.				
Diagram of the major unit operation steps.				
	·			
See Attachment 003 (PMN alpha 6332 Processes Under Submitters Control - SAN.pdf)				
Enter Attachment filename for Part II, Section A, 1. d. PMN alpha 6332 Processes Under Sub	mitters Control - SAN.pdf			



N2014P9 PMN Page 9

I with age	, y								
Part II HUMAN EXPOSURE AND ENVIRONMENTAL RELEASE Continued									
Section A INDUSTRIAL SITES CONTROLLED BY THE SUBMIT	ITTER Continued								
The information on pages 9 and 9a refer to consolidated chemical number(s):	1 2 3 4 5 6								

- 2. Occupational Exposure -- You must make separate confidentiality claims for the description of worker activity, physical form of the new chemical substance, number of workers exposed, and duration of activity. Mark (X) the "Confidential" box next to any item you claim as confidential.
 - (1) -- Describe the activities (i.e. bag dumping, tote filling, unloading drums, sampling, cleaning, etc.) in which workers may be exposed to the substance.
 - (2) -- Mark (X) this column if entry in column (1) is confidential business information (CBI).
 - (3) -- Describe any protective equipment and engineering controls used to protect workers.
 - (4) and (6) -- Indicate your willingness to have the information provided in column (3) or (5) binding.
 - (5) -- Indicate the physical form(s) of the new chemical substance (e.g., solid: crystal, granule, powder, or dust) and % new chemical substance (if part of a mixture) at the time of exposure.
 - (7) -- Mark (X) this column if entries in columns (3) and (5) are confidential business information (CBI).
 - (8) -- Estimate the maximum number of workers involved in each activity for all sites combined.
 - (9) -- Mark (X) this column if entry in column (8) is confidential business information (CBI).
 - (10) and (11) -- Estimate the maximum duration of the activity for any worker in hours per day and days per year.
 - (12) -- Mark (X) this column if entries in columns (10) and (11) are confidential business information (CBI).

	(2)	Familia a sala a Osadas Is	Binding Physical form(s) Option & % new Substance	Option	CRI	# of Workers	CBI		Duration	СВІ	
KXX	X XXX	Engineering Controls (3)	Mark (X) (4)	substance (5)	Mark (X) (6)	(7)	Exposed (8)	(9)	Hrs/Day (10)	Days/Yr (11)	(12)
	Х	XXX		XXX		X	XXX	Х	XXX	XXX	Х
xxx :	X	XXX		XXX		Х	XXX	Х	XXX	XXX	Х
XXX :	X	XXX		XXX		X	XXX	X	XXX	XXX	X
Mark (X) this box if	the	data continues on the next page									



N2014P9A PMN Page 9a

- **3. Environmental Release and Disposal** -- You must make separate confidentiality claims for the release number and the amount of the new chemical substance released and other release and disposal information. Mark (X) the "Confidential" box next to each item you claim as confidential.
 - (1) -- Enter the number of each release point identified in the process description, part II, section A, subsection 1d(3).
 - (2) -- Estimate the amount of the new substance released (a) directly to the environment or (b) into control technology (in kg/day or kg/batch).
 - (3) -- Mark (X) this column if entries in columns (1) and (2) are confidential business information (CBI).
 - (4) -- Identify the media (stack air, fugitive air (optional-see Instruction Manual), surface water, on-sité or off-site land or incineration, POTW, or other (specify)) to which the new substance will be released from that release point.
 - (5) -- a. Describe control technology, if any, and control efficiency that will be used to limit the release of the new substance to the environment. For releases disposed of on land, characterize the disposal method and state whether it is approved for disposal of RCRA hazardous waste. On a continuation sheet, for each site describe any additional disposal methods that will be used and whether the waste is subject to secondary or tertiary on-site treatment. b. Estimate the amount released to the environment after control technology (in kg/day).
 - (6) -- Mark (X) this column if entries in columns (4) and (5) are confidential business information (CBI).
 - (7) -- Identify the destination(s) of releases to water. Please supply NPDES (National Pollutant Discharge Elimination System) numbers for direct discharges or NPDES numbers of the POTW (Publicly Owned Treatment Works). Mark (X) if the POTW name or NPDES # is confidential business information (CBI).

Release Number		Amount of New bstance Released CBI		Medium of release e.g. Stack air	Control technology a optionally a	and efficiency (you i attach efficiency dat	may wish to	СВІ
(1)	(2a)	(2b)	(3)	(4)	(5a)	Binding Mark (X)	(5b)	(6)
XXX	XXX	XXX	Х	XXX	xxx		XXX	Х
XXX	XXX	XXX	Х	XXX	xxx		XXX	X
XXX	XXX	XXX	Х	xxx	xxx		xxx	Х
XXX	XXX	XXX	Х	xxx	xxx		xxx	Х
XXX	XXX	XXX	Х	xxx	xxx		xxx	Х
XXX	XXX	XXX	Х	xxx		xxx	Х	
XXX	XXX	XXX	Х	xxx	xxx		xxx	Х
XXX	XXX	XXX	Х	xxx	xxx		xxx	Х
XXX	XXX	XXX	Х	XXX	xxx		xxx	Х
	Mark (X) this b	oox if the data	continues	on the next page.		1	X	
(7) Mark	(X) the des	stination(s)	of relea	ses to water.		NPDES	S#	CBI
	POTWpro name(s)	ovide						
	Navigable waterway- - provide name(s)							
	OtherSpecify							
	Enter Attachm	ent filename	for Part II,	Section A.				



N2014P9A-1 PMN Page 9a (1)

- 3. Environmental Release and Disposal -- You must make separate confidentiality claims for the release number and the amount of the new chemical substance released and other release and disposal information. Mark (X) the "Confidential" box next to each item you claim as confidential.
 - (1) -- Enter the number of each release point identified in the process description, part II, section A, subsection 1d(3).
 - (2) -- Estimate the amount of the new substance released (a) directly to the environment or (b) into control technology (in kg/day or kg/batch).
 - (3) -- Mark (X) this column if entries in columns (1) and (2) are confidential business information (CBI).
 - (4) -- Identify the media (stack air, fugitive air (optional-see Instruction Manual), surface water, on-sité or off-site land or incineration, POTW, or other (specify)) to which the new substance will be released from that release point.
 - (5) -- a. Describe control technology, if any, and control efficiency that will be used to limit the release of the new substance to the environment. For releases disposed of on land, characterize the disposal method and state whether it is approved for disposal of RCRA hazardous waste. On a continuation sheet, for each site describe any additional disposal methods that will be used and whether the waste is subject to secondary or tertiary on-site treatment. b. Estimate the amount released to the environment after control technology (in kg/day).
 - (6) -- Mark (X) this column if entries in columns (4) and (5) are confidential business information (CBI).
 - (7) -- Identify the destination(s) of releases to water. Please supply NPDES (National Pollutant Discharge Elimination System) numbers for direct discharges or NPDES numbers of the POTW (Publicly Owned Treatment Works). Mark (X) if the POTW name or NPDES # is confidential business information (CBI).

Release Number	Amount Substance		СВІ	Medium of release e.g. Stack air	Control technology a optionally a	and efficiency (you rattach efficiency dat	may wish to	СВІ
(1)	(2a)	(2b)	(3)	(4)	(5a)	Binding Mark (X)	(5b)	(6)
XXX	XXX	xxx	Х	XXX	XXX		xxx	Х
XXX	xxx	XXX	Х	xxx	xxx		xxx	Х
XXX	XXX	XXX	Х	xxx	xxx		XXX	Х
xxx	XXX	XXX	Х	xxx	xxx		XXX	Х
xxx	XXX	XXX	Х	xxx	xxx		XXX	Х
xxx	XXX	XXX	Х	xxx	xxx		XXX	Х
xxx	XXX	XXX	Х	xxx	xxx		XXX	Х
	Mark (X) this I	oox if the data	continues	on the next page.	·			
(7) Mark	(X) the de	stination(s)	of relea	ses to water.		NPDES	S#	CBI
	POTWpro	ovide						
Navigable waterway provide name(s)								
OtherSpecify								
	Enter Attachm	ent filename	for Part II,	Section A.				



SANITIZED SUBMISSION

Part II HUMAN EXPOSURE AND ENVIRONMENTAL RELEASE – Continued										
Section B INDUSTRIAL SITES CONTROLLED BY OTHERS										
The information on pages 10 and 10a refer to consolidated chemical number(s):	1		2	3	4	5	6			
Complete section B for typical processing or use operations involving the new chemical complete this section for operations outside the U.S.; however, you must report any pro-										
Complete a separate section B for each type of processing, or use operation involving t	the new c	hemical	substanc	e. If the sa	ame opera	tion is per	formed at			
more than one site describe the typical operation common to these sites. Identify addition					4: 41	4	_:			
1(a). Operation Description To claim information in this section as confidential.	aı, brack	et (e.g. {	}) tne sp	ecitic into	rmation ti	nat you ci	aım as			
(1) Diagram the major unit operation steps and chemical conversions, including							5 gallon			
pails, 55 gallon drums, rail cars, tank trucks, etc). On the diagram, identify (2) Either in the diagram or in the text field 1(b) below, provide the identity, the							new			
chemical substance basis), and entry point of all feedstocks (including read	ctants, so	lvents ar	d catalys							
streams, and wastes. Include cleaning chemicals (note frequency if not use (3) Either in the diagram or in the text field 1(b) below, identify by number the				small or i	ntermitten	t releases.	to the			
environment of the new chemical substance.	•	•	Ū				,			
(4) Please enter the # of sites (remember to identify the locations of these site										
	Numb	er of Sit	es)	XXX	Conf	fidential	X			
See Attachment 005 (PMN Alpha 6332 Processes Not Under Submitters Control - SAI	N.pdf)									
dee Attachment 603 (Fiving Alpha 6332 Frocesses Not Order Submitters Control - 3Ai	i v .pui)									
1(b). (Optional) This space is for a text description to clarify the diagram above.					Cont	fidential				
					Coni	identiai	X			
XXX										
Enter Attachment filename for Part II, Section B on the bottom of page 10a.	Alpha 63	332 Proce	esses No	t Under Si	ıbmitters (Control - S	SANIndf			

EPA FORM 7710-25 (Rev. 6-09)



Continuation Sheet



N2014P10A PMN Page 10a

2. Worker Exposure/Environmental Release

- (1) -- From the diagram above, provide the letter for each worker activity. Complete 2-8 for each worker activity described.
- (2) -- Estimate the number of workers exposed for all sites combined.
- (4) -- Estimate the typical duration of exposure per worker in (a) hours per day and (b) days per year.
- (6) -- Describe physical form of exposure and % new chemical substance (if in mixture), and any protective equipment and engineering controls, if any, used to protect workers.
- (7) -- Estimate the percent of the new substance as formulated when packaged or used as a final product.
- (9) -- From the process diagram above, enter the number of each release point. Complete 9-13 for each release point identified.
- (10) -- Estimate the amount of the new substance released (a) directly to the environment or (b) into control technology to the environment (in kg/day or kg/batch).
- (12) -- Describe media of release i.e. stack air, fugitive air (optional-see Instructions Manual), surface water, on-site or off-site land or incineration, POTW, or other (specify) and control technology, if any, that will be used to limit the release of the new substance to the environment.
- (14) -- Identify byproducts which may result from the operation.
 - (3), (5), (8), (11), (13) and (15) -- Mark (X) this column if any of the proceeding entries are confidential business information (CBI).

Letter of Activity	# of Workers Exposed	СВІ	Durat Expo	ion of sure	СВІ	Protect	ive Equip./Engineering Controls/Physical Form	Form substance			
(1)	(2)	(3)	(4a)	(4b)	(5)		(6)	(6)	(7)	(8)	
Release Number	Amoun	t of New	/ Substan	ce Releas	sed	СВІ	Media of Release & Contro	l Technology		СВІ	
(9)	(10	0a)		(10b)		(11)	(12)			(13)	
XXX	xx	ΧX		XXX		Χ	xxx			Χ	
XXX	XX	Χ		XXX		Х	xxx			Χ	
XXX	XX	ίΧ		XXX		Х	xxx			Χ	
XXX	XX	ΧX		XXX		Х	xxx			Х	
XXX	XX	ίX		XXX		Х	xxx			Х	
XXX	XX	Χ		XXX		Х	xxx			Χ	
XXX	XX	ίΧ		XXX		Х	xxx			Χ	
	Mark (X) this	box if the	ne data co	ntinues or	the ne	ct page.			X		
(14) Byp	roducts:								(15) CBI		
	Enter Attach	ment file	name for	Part II, Se	ction B.						



PMN2014P10A-1

PMN Page 10a (1)

2. Worker Exposure/Environmental Release

- (1) -- From the diagram above, provide the letter for each worker activity. Complete 2-8 for each worker activity described.
- (2) -- Estimate the number of workers exposed for all sites combined.
- (4) -- Estimate the typical duration of exposure per worker in (a) hours per day and (b) days per year.
- (6) -- Describe physical form of exposure and % new chemical substance (if in mixture), and any protective equipment and engineering controls, if any, used to protect workers.
- (7) -- Estimate the percent of the new substance as formulated when packaged or used as a final product.
- (9) -- From the process diagram above, enter the number of each release point. Complete 9-13 for each release point identified.
- (10) -- Estimate the amount of the new substance released (a) directly to the environment or (b) into control technology to the environment (in kg/day or kg/batch).
- (12) -- Describe media of release i.e. stack air, fugitive air (optional-see Instructions Manual), surface water, on-site or off-site land or incineration, POTW, or other (specify) and control technology, if any, that will be used to limit the release of the new substance to the environment.
- (14) -- Identify byproducts which may result from the operation.
 - (3), (5), (8), (11), (13) and (15) -- Mark (X) this column if any of the proceeding entries are confidential business information (CBI).

Letter of Activity	# of Workers Exposed	СВІ	Durat Expo	ion of sure	СВІ	Protect	ive Equip./Engineering Controls/Physical Form	% new substance	% in Formulation	СВІ
(1)	(2)	(3)	(4a)	(4b)	(5)		(6)	(6)	(7)	(8)
XXX	XXX	Х				XXX		XXX	XXX	Χ
XXX	XXX	Х				XXX		XXX	XXX	Χ
XXX	XXX	Х				XXX		XXX	XXX	Х
Release Number	Amount	t of New	Substan	ce Releas	sed	СВІ	Media of Release & Contro		СВІ	
(9)	(10	Da)		(10b)		(11)	(12)			(13)
VVV	\/\	· V		XXX		Х	xxx			Χ
XXX	XX			7001						
XXX	XX			XXX		X	xxx			X
		XX					xxx			X
XXX	XX	X		XXX		Х				
XXX	xx	X		xxx		X	xxx			Х
XXX	xx	X		xxx		X	xxx			Х
XXX	xx	X		xxx		X	xxx			Х
xxx xxx xxx	xx	X X	ne data co	xxx xxx xxx	n the ne	X X	xxx		X	Х
XXX XXX XXX	XX XX XX Mark (X) this	X X	ne data co	xxx xxx xxx	n the ne	X X	xxx		X (15) CBI	Х



PMN2014P10A-2

PMN Page 10a (2)

2. Worker Exposure/Environmental Release

- (1) -- From the diagram above, provide the letter for each worker activity. Complete 2-8 for each worker activity described.
- (2) -- Estimate the number of workers exposed for all sites combined.
- (4) -- Estimate the typical duration of exposure per worker in (a) hours per day and (b) days per year.
- (6) -- Describe physical form of exposure and % new chemical substance (if in mixture), and any protective equipment and engineering controls, if any, used to protect workers.
- (7) -- Estimate the percent of the new substance as formulated when packaged or used as a final product.
- (9) -- From the process diagram above, enter the number of each release point. Complete 9-13 for each release point identified.
- (10) -- Estimate the amount of the new substance released (a) directly to the environment or (b) into control technology to the environment (in kg/day or kg/batch).
- (12) -- Describe media of release i.e. stack air, fugitive air (optional-see Instructions Manual), surface water, on-site or off-site land or incineration, POTW, or other (specify) and control technology, if any, that will be used to limit the release of the new substance to the environment.
- (14) -- Identify byproducts which may result from the operation.
 - (3), (5), (8), (11), (13) and (15) -- Mark (X) this column if any of the proceeding entries are confidential business information (CBI).

Letter of Activity	# of Workers Exposed	СВІ	Durat Expo	ion of sure	СВІ	Protecti	ive Equip./Engineering Controls/Physical Form	% new substance	% in Formulation	СВІ
(1)	(2)	(3)	(4a)	(4b)	(5)		(6)	(6)	(7)	(8)
xxx	XXX	Х				XXX		XXX	XXX	Х
Release Number			Substan	ce Releas	ed	СВІ	Media of Release & Contro	l Technology		СВІ
(9)	(10	0a)		(10b)		(11)	(12)			(13)
	Mark (X) this	box if th	ne data co	ntinues or	the ne	xt page.				
(14) Bypi	roducts:								(15) CBI	
	Enter Attachi	ment file	name for	Part II, Se	ction B.					



SANITIZED SUBMISSION

OPTIONAL POLLUTION PREVENTION INFORMATION

To claim information in the following section as confidential, bracket (e.g. {}) the specific information that you claim as confidential.

In this section you may provide information not reported elsewhere in this form regarding your efforts to reduce or minimize potential risks associated with activities surrounding manufacturing, processing, use and disposal of the PMN substance. Please include new information pertinent to pollution prevention, including source reduction, recycling activities and safer processes or products available due to the new chemical substance. Source reduction includes the reduction in the amount or toxicity of chemical wastes by technological modification, process and procedure modification, product reformulation, and/or raw materials substitution. Recycling refers to the reclamation of useful chemical components from wastes that would otherwise be treated or released as air emissions or water discharges, or land disposal. Quantitative or qualitative descriptions of pollution prevention, source reduction and recycling should emphasize potential risk reduction in addition to compliance with existing regulatory requirements. The EPA is interested in the information to assess overall net reductions in toxicity or environmental releases and exposures, not the shifting of risks to other media (e.g., air to water) or nonenvironmental areas (e.g., occupational or consumer exposure). To the extent known, information about the technology being replaced will assist EPA in its relative risk determination. In addition, information on the relative cost or performance characteristics of the PMN substance to potential alternatives may be provided.

Describe the expected net benefits, such as

- (1) an overall reduction in risk to human health or the environment;
- (2) a reduction in the generation of waste materials through recycling, source reduction or other means;
- (3) a reduction in the use of hazardous starting materials, reagents, or feedstocks;
- (4) a reduction in potential toxicity, human exposure and/or environmental release; or
- (5) the extent to which the new chemical substance may be a substitute for an existing substance that poses a greater overall risk to human health or the environment.

Information provided in this section will be taken into consideration during the review of this substance. See PMN Instructions Manual and Pollution Prevention Guidance manual for guidance and examples.

and Pollution Prevention Guidance manual for guidance and examples.		
Waste generated from cleaning is minimized by cleaning the vessel only at th of solvent necessary. The waste solvent is sent off-site for reuse as a fuel for to a waste incinerator.	e end of a campaign. Cleaning is done using the smallest quanti a manufacturing kiln (e.g., a cement kiln), as opposed to being s	ity sent
Enter Attachment filename for Pollution Prevention Page 11.		



2014P12 **PMN Page 12**

Part III -- LIST OF ATTACHMENTS

Attach continuation sheets for sections of the form, test data and other data (including physical/chemical properties and structure/activity information), and optional information after this page. Clearly identify the attachment and the section of the form to which it relates, if appropriate. Number consecutively the pages of any paper attachments. In the Number of Pages column below, enter the inclusive page numbers of each attachment for paper submissions or enter the total number of pages for each attachment for electronic submissions. Electronic attachments can be identified by filename.

Mark (X) the "Confidential" box next to any attachment name or filename you claim as confidential. Read the Instructions Manual for guidance on how to claim any information in an attachment as confidential. You must include with the sanitized copy of the

notice form a sanitized version of any attachment in which you claim information as confidential.

#	Attachment Name	Attachment Filename	Number of Pages	Associated PMN Section Number	СВІ
001	Structure Sanitized	SAN.pdf	1	Pt.I, Sec.B, 1e.	
002	IES Sanitized	PMN SAN.pdf	1	Pt.I, Sec.B, 1c.	
003	Processes Under Submitters Control - SAN	PMN Processes Under Submitters Control -	3	Pt.2, Sec.A, 1d.	
004	FTIR - SAN	FTIR - SAN.pdf	1		
005	Processes Not Under Submitters Control - SAN	PMN Processes Not Under Submitters Control -	5	Pt.2, Sec.B, 1a.	
006	MSDS	MSDS - PMN.pdf	9		
	Mark (X) this box if the data continues on the r	next page.			



PHYSICAL AND CHEMICAL PROPERTIES WORKSHEET											
The information on this	page refers to ch	emical r	number(s):	<u> </u>	2	3] 4	5		6	
To assist EPA's review of physical and chemical properties data, please complete the following worksheet for data you provide and include it in the action to the property measured, the value of the property, the units in which the property is measured (as necessary), and whether or not the property is claimed as confidential. Give the attachment number (found on page 12) in column (b). The physical state of the neat substance should be provided. These measured properties should be for the neat (100% pure) chemical substance. Properties that are measured for mixtures or commutations should be so noted (% PMN substance in). You are not required to submit this worksheet; however, EPA strongly recommends that you do so, as it will simplify the review and ensure that confidential information is properly protected. You should submit this worksheet as a supplement to your submission of test data. This worksheet is not a substitute for submission of test data.											
Property (a)		Unit	Mark X if Provided	Attachment Number (b)			Measu or Estin (M or	nate	CBI Mark (X) (d)		
Physical state of neat sub	stance				(solid)	(liquid)	(gas))			Х
Vapor Pressure @ Temperature		°C					Torr				
Density/relative density					XXX		g/cm	3			Х
Solubility											
@ Temperature		°C					g/L				
Solvent											
Solubility in Water @ Temperature		°C					g/L				
Melting Temperature							°C				
Boiling / Sublimation temperature @		Torr					°C				
Spectra				xxx	XXX						Χ
Dissociation constant											
Octanol / water partition c	oefficient										
Henry's Law constant											
Volatilization from water											
Volatilization from soil											
pH@ concentration	XXX				XXX						X
Flammability											
Explodability											
Adsorption / Coefficient											
Particle Size Distribution											
Other – Specify											

Attachment Number 001

Attachment Name

Structure Sanitized

Associated PMN Section Number Pt.I, Sec.B, 1e.

Does not contain CBI

Report Number XCX4140606225183740

Attachment Number 002

Attachment Name

IES Sanitized

Associated PMN Section Number Pt.I, Sec.B, 1c.

Does not contain CBI

Report Number XCX4140606225183740

Attachment Number 003

Attachment Name

Processes Under Submitters Control - SAN

Associated PMN Section Number Pt.2, Sec.A, 1d.

Does not contain CBI

Report Number XCX4140606225183740

Attachment Number 004

Attachment Name FTIR - SAN

Associated PMN Section Number N/A

Does not contain CBI

Report Number XCX4140606225183740

Attachment Number 005

Attachment Name
Processes Not Under Submitters Control - SAN

Associated PMN Section Number Pt.2, Sec.B, 1a.

Does not contain CBI

Report Number XCX4140606225183740

Attachment Number 006

Attachment Name

MSDS

Associated PMN Section Number N/A

Does not contain CBI

Report Number XCX4140606225183740

PROCESS AND STRUCTURE FOIA EXEMPT

Structure:





InventoryExpertService

A division of the American Chemical Society

Phone: 800-631-1884, 614-447-3870

Fax: 614-447-3747

E-mail: answers@cas.org

Web: www.cas.org/products/other-cas-products/client-services/

INVENTORY EXPERT SERVICE REPORT

Processes Under Submitter's Control

Processes Not Under Submitter's Control



Material Safety Data Sheet



1. Product and Company Identification

12

Material name Version #

Issue date June-04-2014

Revision date June-04-2014

CAS# Mixture

Product use

Manufacturer

information

Supplier information

Supplier emergency telephone number(s)

2. Hazards Identification

Emergency overview

WARNING

Harmful if swallowed, inhaled or absorbed through skin. Irritating to eyes, respiratory system and skin. May cause central nervous system effects. Prolonged exposure may cause chronic effects. Possible cancer hazard - may cause cancer based on animal data.

This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

OSHA regulatory status **Potential health effects**

Routes of exposure

Eye contact. Skin contact. Inhalation. Ingestion.

Eyes

May cause severe eye irritation. Eye contact may result in corneal injury. Symptoms include pain, redness and tearing. Effects may be slow to heal. Do not get this material in contact with eyes.

Skin

Irritating to skin. Harmful if absorbed through skin. 2-Butoxyethanol may be absorbed through the

skin in toxic amounts if contact is repeated and prolonged. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash). Do not

get this material in contact with skin.

Inhalation Harmful if inhaled. May cause irritation of respiratory tract. Inhalation of vapors may cause central

nervous system (CNS) effects with symptoms such as headache, dizziness, nausea and vomiting.

Do not breathe gas/fumes/vapor/spray.

Material Name:

Version Number: 12



Ingestion Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and

diarrhea. Ingestion of larger amounts may cause defects to the central nervous system (e.g.

dizziness, headache). Do not ingest.

Target organs
Chronic effects

Eyes. Skin. Liver. Kidney. Blood. Central nervous system. Respiratory system. Gastrointestinal tract.

Liver and kidney injuries may occur. 2-Butoxyethanol has caused blood (hematotoxic) effects in experimental animals following inhalation, dermal and oral exposure. However, humans are

considered much less sensitive to the observed effects.

Signs and symptoms

Irritation. Headache. Nausea. Dizziness. Decrease in motor functions. Narcosis.

Potential environmental effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

3. Composition / Information on Ingredients

Components	CAS #	Percent
2-Butoxyethanol	111-76-2	

4. First Aid Measures

First aid procedures

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if

present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Skin contact

Immediately flush skin with plenty of water. Remove contaminated clothing, including shoes, after flushing has begun. Get medical attention if irritation develops and persists. Thoroughly wash (or discard) clothing and shoes before reuse. If breathing stopped, trained personnel should begin artificial respiration immediately; and if the heart has stopped, trained personnel should begin

cardiopulmonary resuscitation (CPR) immediately.

Inhalation

Call a POISON CENTER or doctor/physician if you feel unwell. If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. If breathing stopped, trained personnel should begin artificial respiration immediately; and if the heart has stopped, trained personnel should begin cardiopulmonary resuscitation (CPR)

immediately.

Ingestion

Get medical attention immediately. If swallowed, rinse mouth with water (only if the person is conscious). Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without medical advice. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing stopped, trained personnel should begin artificial respiration immediately; and if the heart has stopped, trained personnel should begin

cardiopulmonary resuscitation (CPR) immediately.

General advice

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. If you feel unwell, seek medical advice (show the label where possible). Show this cafety data cheef to the decree in attendance.

this safety data sheet to the doctor in attendance.

5. Fire Fighting Measures

Flammable properties

The product is not flammable.

Extinguishing media

Suitable extinguishing

media

Water fog. Carbon dioxide (CO2). Alcohol resistant foam. Dry chemical powder.



Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Protection of firefighters

Specific hazards arising from the chemical

No unusual fire or explosion hazards noted.

Protective equipment and precautions for firefighters

Firefighters should wear full protective gear. Evacuate area and fight fire from a safe distance.

Fire fighting equipment/instructions

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. In the event of fire and/or explosion do not breathe fumes. Cool containers with flooding quantities of water until well after fire is out. ALWAYS stay away from tanks engulfed in flame. Move containers from fire area if you

can do so without risk.

Hazardous combustion products

May include oxides of carbon. May include oxides of nitrogen. Ammonia.

6. Accidental Release Measures

Personal precautionsDo not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Keep people away from and upwind of spill/leak. Keep out of low areas. Ensure adequate

ventilation. Ventilate closed spaces before entering them.

Environmental precautions Methods for containment

Prevent further leakage or spillage if safe to do so. Do not contaminate water.

Stop leak if you can do so without risk. Prevent entry into waterways, sewer, basements or

confined areas. Should not be released into the environment.

Methods for cleaning up

Extinguish all flames in the vicinity.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and

place into a container for later disposal. Clean contaminated surface thoroughly.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to

remove residual contamination.

Never return spills in original containers for re-use. For waste disposal, see section 13 of the MSDS.

Clean up in accordance with all applicable regulations.

Other information

7. Handling and Storage Handling

Avoid heat, sparks, open flames and other ignition sources. When using, do not eat, drink or smoke. Do not use in areas without adequate ventilation. Wash thoroughly after handling. Wear

personal protective equipment. Avoid release to the environment. Do not empty into drains. Do not breathe mist or vapor. Do not get this material in contact with eyes. Do not taste or swallow. Do

not get on skin and clothing.

Storage Keep away from heat and sources of ignition. Store in a closed container away from incompatible

materials. Keep away from food and drink. Store in a well-ventilated place. Keep container tightly

closed. Store in accordance with local/regional/national/international regulation.



8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Туре	Value		
2-Butoxyethanol (CAS 111-76-2)	TWA	20 ppm		
US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)				
Components	Туре	Value		
2-Butoxyethanol (CAS	PEL	240 mg/m3		

50 ppm

Biological limit values

111-76-2)

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time	
2-Butoxyethanol (CAS 111-76-2)	200 mg/g	Butoxyacetic acid (BAA),	Creatinine in urine	*	
		with hydrolysis			

^{* -} For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

2-Butoxyethanol (CAS 111-76-2) Skin designation applies.

US - Tennesse OELs: Skin designation

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

Engineering controlsEnsure adequate ventilation, especially in confined areas. Eye wash fountain and emergency

showers are recommended.

Personal protective equipment

Eye / face protection Avoid contact with eyes. Wear safety glasses with side shields (or goggles) and a face shield.

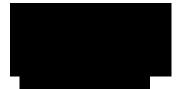
Skin protection Avoid contact with the skin. Wear protective gloves. Wear suitable protective clothing. Normal work clothing (long sleeved shirts and long pants) is recommended. Closed-toe shoes recommended.

clothing (long sleeved shirts and long pants) is recommended. Closed-toe shoes recommended. The suitability for a specific workplace should be discussed with the producers of the protective gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other.

quality features and is different from one producer to the other.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure

limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.



Hand protection Wear protective gloves. The suitability for a specific workplace should be discussed with the

producers of the protective gloves. The choice of an appropriate glove does not only depend on its

material but also on other quality features and is different from one producer to the other.

General hygiene considerations

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice. When

using, do not eat, drink or smoke.

9. Physical & Chemical Properties

Appearance Clear.
Physical state Liquid.
Form Liquid.
Color Dark amber.

Odor Slightly Vegetable oil odor.

Odor threshold Not available.

pH 4 - 6

Vapor pressureNot available.Vapor densityNot available.Boiling pointNot available.

Melting point/Freezing point 15 - 25 °F (-9.44 - -3.89 °C)

Solubility (water)Insoluble.Specific gravity0.96 - 1.02Relative densityNot available.

Flash point > 201.0 °F (> 93.9 °C)

Flammability limits in air,

upper, % by volume

Flammability limits in air,

lower, % by volume

Not available.

Not available.

Auto-ignition temperature Not available.

10. Chemical Stability & Reactivity Information

Chemical stability Material is stable under normal conditions.

Conditions to avoid Heat, flames and sparks. Avoid temperatures exceeding the flash point.

Incompatible materials Strong oxidizing agents. Strong bases.

Hazardous decomposition

products

Carbon monoxide, carbon dioxide, oxides of nitrogen. Ammonia. peroxides.

Possibility of hazardous

reactions

Hazardous polymerization does not occur.

11. Toxicological Information

Toxico		
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Oral LD50

Components	Species	Test Results	
2-Butoxyethanol (111-76-2)			
Acute			
Dermal			
LD50	Rabbit	400 mg/kg	
Inhalation			
LC50	Rat	450 mg/l, 4 Hours	
<i>Dermal</i> LD50 <i>Inhalation</i>			

Local effects Harmful if swallowed, inhaled or absorbed through skin. Irritating to eyes, respiratory system and

skin.

Rat

Chronic effects 2-Butoxyethanol may be absorbed through the skin in toxic amounts if contact is repeated and

prolonged. 2-Butoxyethanol has caused blood (hematotoxic) effects in experimental animals following inhalation, dermal and oral exposure. However, humans are considered much less sensitive to the observed effects. Prolonged or repeated exposure may cause liver and kidney

560 mg/kg

damage.

Carcinogenicity Possible cancer hazard - may cause cancer based on animal data.

ACGIH Carcinogens

2-Butoxyethanol (CAS 111-76-2)

A3 Confirmed animal carcinogen with unknown relevance to

humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

2-Butoxyethanol (CAS 111-76-2) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Skin corrosion/irritation Irritating to skin.

Mutagenicity Not expected to be hazardous by OSHA criteria.

Neurological effectsHazardous by OSHA criteria. Inhalation of vapors may cause central nervous system (CNS) effects

with symptoms such as headache, dizziness, nausea and vomiting.

Reproductive effectsNot expected to be hazardous by OSHA criteria. **Teratogenicity**Not expected to be hazardous by OSHA criteria.

12. Ecological Information

Ecotoxicological data

Components		Species	Test Results
2-Butoxyethanol (111-76-2)			
Aquatic			
Fish	LC50	Fish	1490 mg/L, 96 Hours

Ecotoxicity Not available.

Environmental effects An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Aquatic toxicity Not available.



Persistence and degradability Not available.

Bioaccumulation / accumulation

Bioaccumulative potential

Octanol/water partition coefficient log Kow

2-Butoxyethanol 0.83

13. Disposal Considerations

Disposal instructionsCollect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the

material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations. It is the

responsibility of the user of the product to determine, at the time of disposal, whether the product

meets the criteria for hazardous waste.

Waste from residues / unused products

Empty containers or liners may retain some product residues. This material and its container must

be disposed of in a safe manner.

Contaminated packaging Empty containers should be sent to an approved waste handling site for recycling or disposal.

14. Transport Information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

TDG

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulationsThis product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard,

29 CFR 1910.1200.

One or more components of this product is not listed on TSCA.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2)

Not regulated.

DEA Essential Chemical Code Number

Not regulated.

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Not regulated.

DEA Exempt Chemical Mixtures Code Number

Not regulated.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA (Superfund) reportable quantity, lbs

None



Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes

Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No

Section 302 extremely hazardous substance

Not listed.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No

^{*}A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

Toxic Substances Control Act (TSCA) Inventory

US state regulations

United States & Puerto Rico

WARNING: This product contains a chemical known to the State of California to cause cancer.

No

US. Massachusetts RTK - Substance List

2-Butoxyethanol (CAS 111-76-2)

US. New Jersey Worker and Community Right-to-Know Act

2-Butoxyethanol (CAS 111-76-2)

US. Pennsylvania Worker and Community Right-to-Know Law

2-Butoxyethanol (CAS 111-76-2)

US. Rhode Island RTK

Not regulated.

16. Other Information

HMIS® ratings Health: 2*

Flammability: 1 Physical hazard: 0

NFPA ratings Health: 2

Flammability: 1 Instability: 0

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).



Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. THIS PRODUCT'S HEALTH AND SAFETY INFORMATION IS PROVIDED TO ASSIST OUR CUSTOMERS IN ASSESSING COMPLIANCE WITH HEALTH, SAFETY AND ENVIRONMENTAL REGULATIONS. THE INFORMATION CONTAINED HEREIN IS BASED ON DATA AVAILABLE TO US, AND IS BELIEVED TO BE ACCURATE, ALTHOUGH NO GUARANTEE OR WARRANTY IS PROVIDED OR IMPLIED BY THE COMPANY IN THIS RESPECT. SINCE THE USE OF THIS PRODUCT IS WITHIN THE EXCLUSIVE CONTROL OF THE USER, IT IS THE USER'S RESPONSIBILITY TO DETERMINE THE CONDITIONS OF SAFE USE. SUCH CONDITIONS MUST COMPLY WITH ALL GOVERNMENTAL REGULATIONS.

This data sheet contains changes from the previous version in section(s):

Product and Company Identification: Alternate Trade Names Composition / Information on Ingredients: Ingredients

Fire Fighting Measures: General fire hazards

Ecological Information: Ecotoxicity Regulatory Information: Canada HazReg Data: International Inventories